Lake Erie Harmful Algal Bloom Bulletin

04 October, 2018, Bulletin 31

Analysis

The *Microcystis* cyanobacteria bloom in the western basin of Lake Erie continues to decrease in concentration and extent. Observed winds this week (10/1-3) caused slight mixing that may have reduced remaining surface concentrations. Very low concentrations of *Microcystis* are detectable in satellite imagery from Maumee Bay along the Michigan coast to Allens Cove, and nowhere else in the western basin. Toxins were only detected at sampling sites outside of Maumee Bay and 4 miles northeast of Allens Cove. Measured toxin concentrations remain below the recreational threshold at all locations. The persistent cyanobacteria bloom in Sandusky Bay continues.

Forecasts

Forecast winds (5-14 kn) today through Monday (10/4-8) will likely cause mixing and minimize transport of remaining *Microcystis* concentrations. The water temperature in the western basin remains 68˚F (20˚C) and below, which should substantially decrease bloom concentrations through this week. -Ludema, Davis

Additional Resources

To find a safe place for recreation, visit the Ohio DOH "BeachGuard" site: *http://publicapps.odh.ohio.gov/beachguardpublic/*
Ohio EPA's site on harmful algal blooms: *http://epa.ohio.gov/HAB-Algae*
NOAA's GLERL provides additional HAB data here: *http://www.glerl.noaa.gov/res/HABs_and_Hypoxia*

The images below are "GeoPDF". Please visit https://go.usa.gov/xReTC for instructions on viewing longitude and latitude.

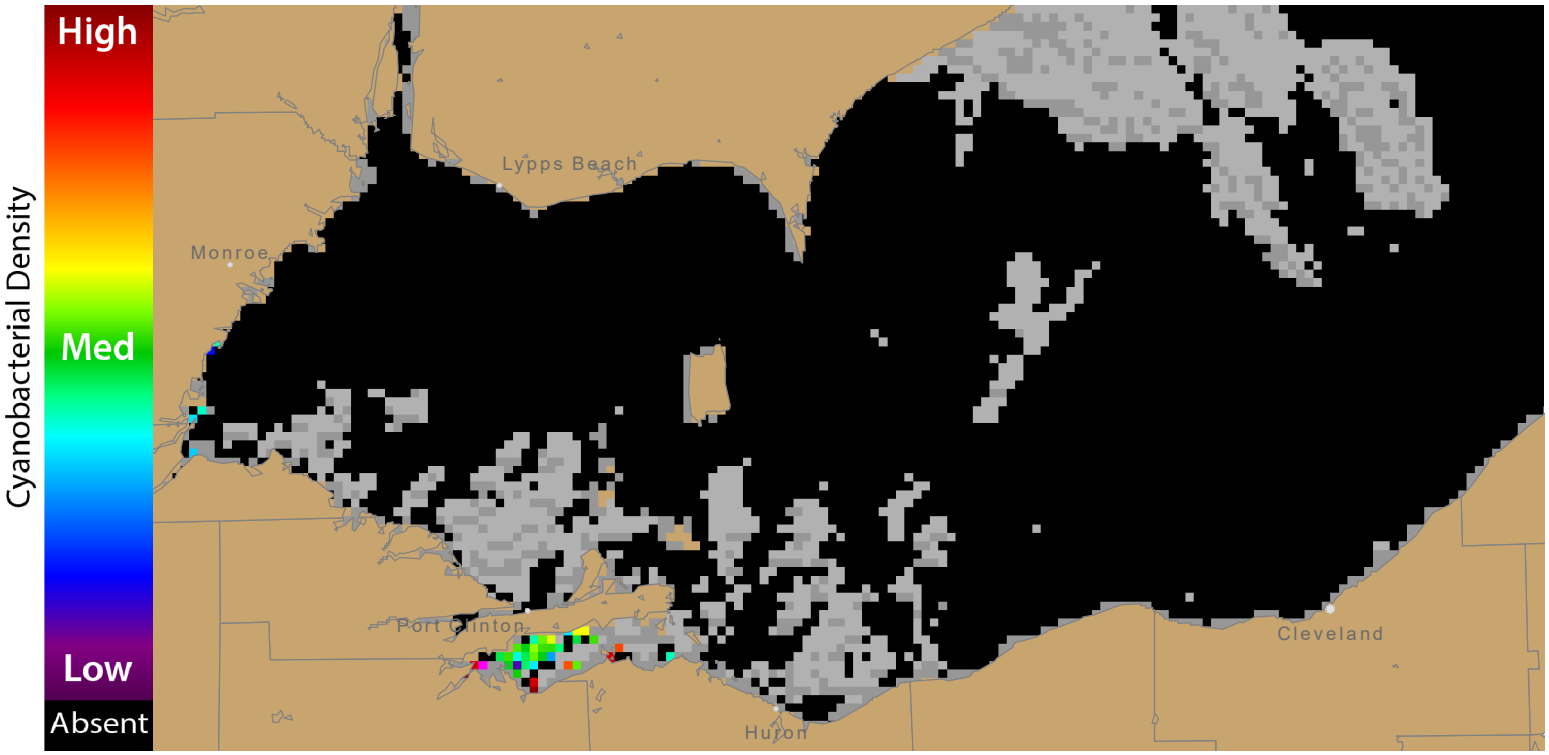


Figure 1. Cyanobacterial Index from NASA MODIS-Aqua data collected 03 October, 2018 at 13:01 EST. Grey indicates clouds or missing data. The estimated threshold for cyanobacteria detection is 20,000 cells/mL.

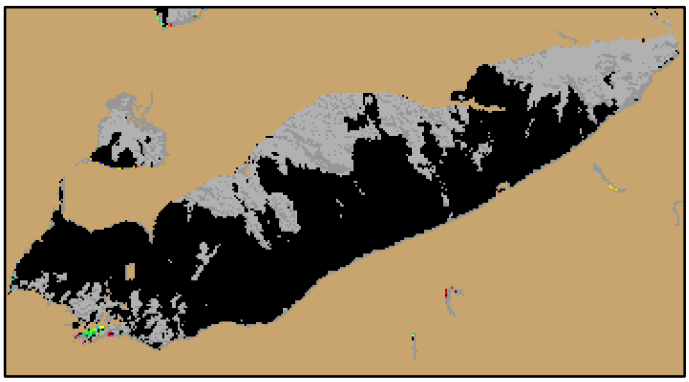
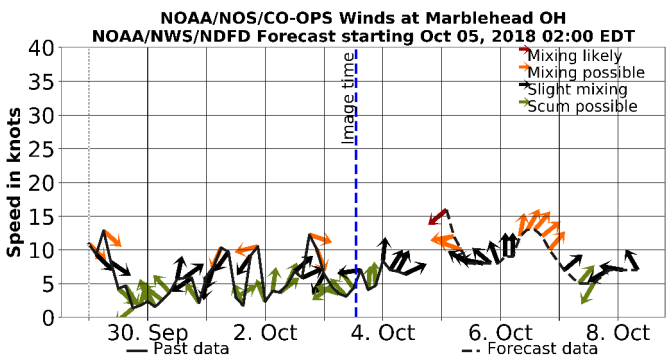


Figure 2. Cyanobacterial Index from NASA MODIS-Aqua data collected 03 October, 2018 at 13:01.



Wind speed and direction from Marblehead, OH. Blooms mix through the water column at wind speeds greater than 15 knots (or 7.7 m/s).

For more information and to subscribe to this bulletin, go to: https://tidesandcurrents.noaa.gov/hab/lakeerie.html

Figure 3. Nowcast position of bloom for 04 October, 2018 using LEOFS modelled currents to move the bloom from the 03 October, 2018

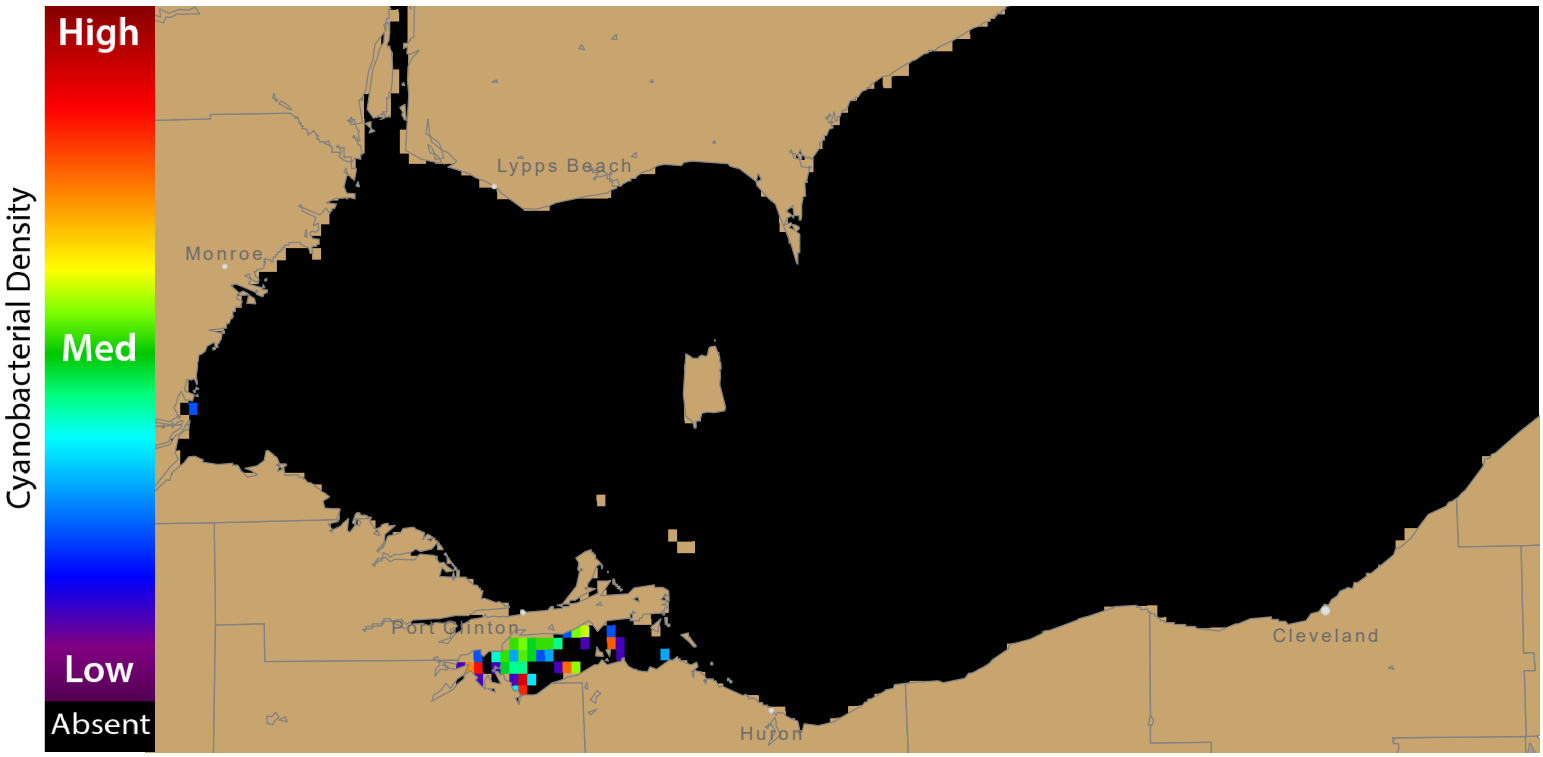
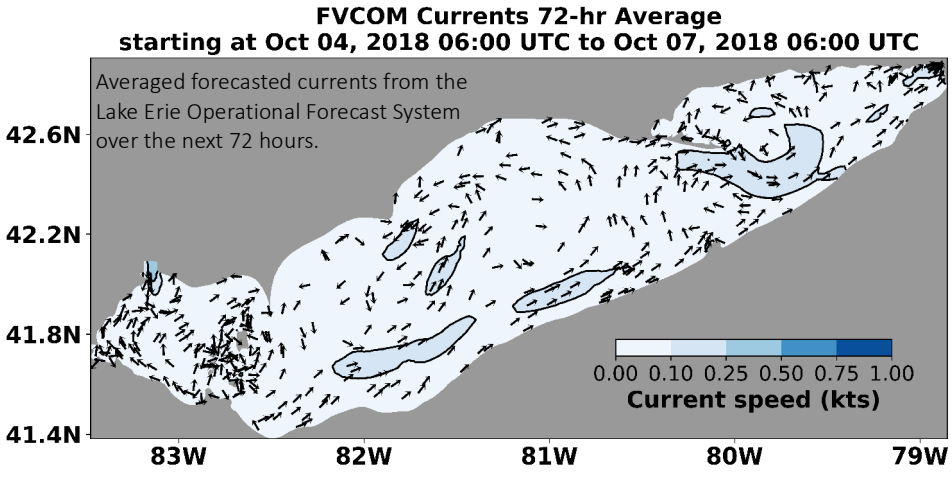


Figure 4. Forecast position of bloom for 07 October, 2018 using LEOFS modelled currents to move the bloom from the 03 October, 2018



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